



***PRLCE in the Philippines***  
***40<sup>th</sup> EGNRET Meeting***  
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Asia-Pacific  
Economic Cooperation



# OUTLINE OF PRESENTATION

1

Background (*RE in the Philippines*)

2

Areas covered in the review

3

Progress of the PRLCE in the Philippines

4

Review Team Composition



# BACKGROUND (RE IN THE PHILIPPINES)

Population	94 Mil.
Land Area, sq. km	300,000
Income/capita	\$4,214
Energy/capita	0.49 TOE
Households Electrified	70%
No. Islands	7,107

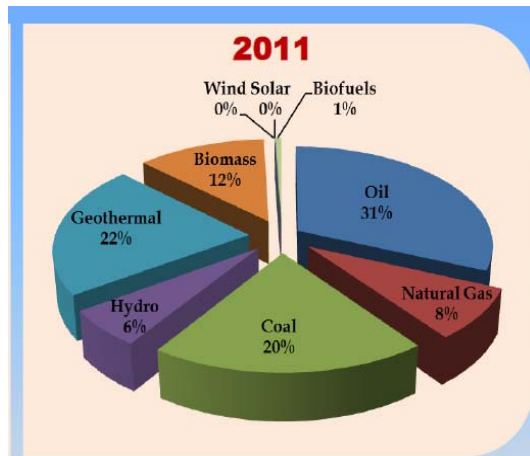






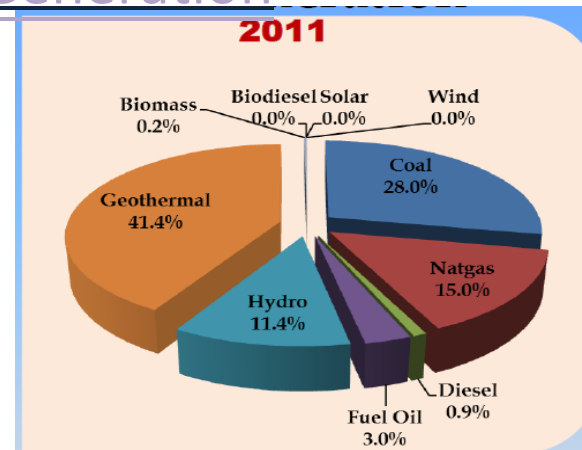
# BACKGROUND (*RE IN THE PHILIPPINES*)

## Primary Energy Mix



	2011
Total Energy (MTOE)	39.40
Self-sufficiency	60.0
Shares (%)	
<i>Renewable Energy (RE)</i>	40.7

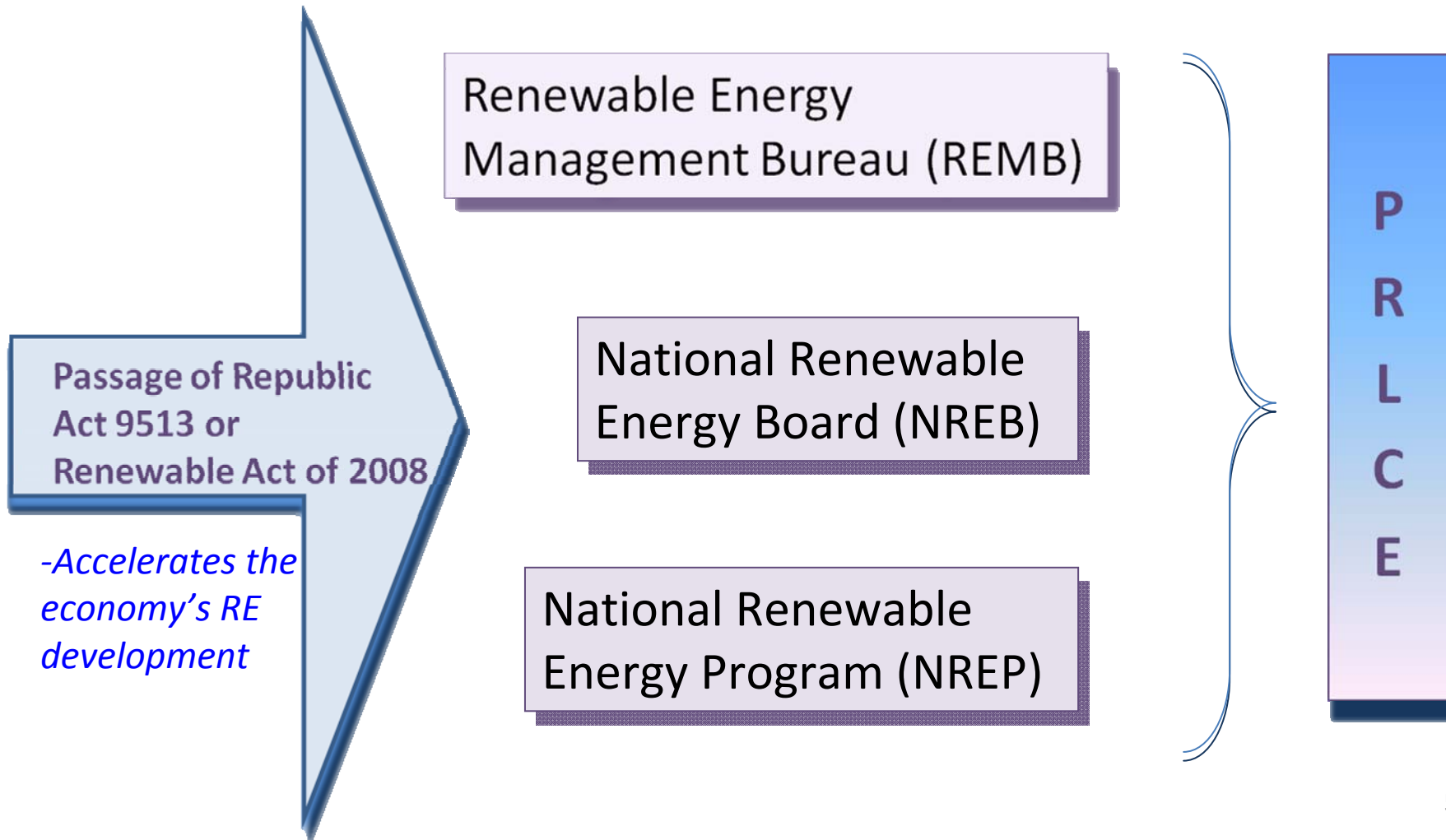
## Fuel Input Mix for Power Generation



	2011
Total Energy (MTOE)	20.63
Self-sufficiency	68.11
Shares (%)	
<i>Renewable Energy (RE)</i>	53.07



# BACKGROUND (*RE IN THE PHILIPPINES*)





# BACKGROUND (*RE IN THE PHILIPPINES*)

## National Renewable Energy Program (NREP)

*Institutionalize a comprehensive approach to accelerate the applications of renewable energy technologies in a sustainable manner*

### Development Framework

Sectoral Sub-Programs

Policy and Program Support

*The 2010 RE Capacity level tripled by 2030*





# AREAS COVERED IN THE REVIEW

**P**

Institutional Context

Renewable Energy Goals, Targets and Strategy

**R**

Regulation and Infrastructure

**L**

Bio-Fuels and Biomass Energy

Geothermal, Solar and Wind

**C**

Hydropower Energy

**E**

Power Supply System (Smart Grid, FiT, Private Participation)

Green House Gas Management



# AREAS COVERED IN THE REVIEW

## Institutional Context

### Creation of REMB

*Implements policies, plans and programs related to RE;*

*Develop and maintain a centralized, comprehensive and unified data and information on RE;*

### Creation of NREB

*Evaluate and recommend to the DOE the mandated RPS and minimum RE generation capacities in off-grid areas*

*Implementation of NREP; FiT;  
Oversee RE Trust Fund*





# AREAS COVERED IN THE REVIEW

## Renewable Energy Goals, Targets and Strategy

### NREP

NREP (Sectoral Targets and Programs)

### Plans And Programs

Philippine Energy Plan (PEP), Missionary Electrification Development Plan (MEDP), National Energy Efficiency and Conservation (NEECP), etc

### Related Acts and Laws

Renewable Act of 2008, Biofuels Act of 2006



# AREAS COVERED IN THE REVIEW



NREP, Grid plans

**Regulation  
and  
Infrastructure**

**Related  
Agencies**

NREB, Energy Regulatory  
Commission (ERC)

**Finance**

Loan Packages, Financing  
Institutions



# AREAS COVERED IN THE REVIEW

**Bio-Fuels and  
Biomass  
energy**

**Geothermal,  
Solar and  
Wind**

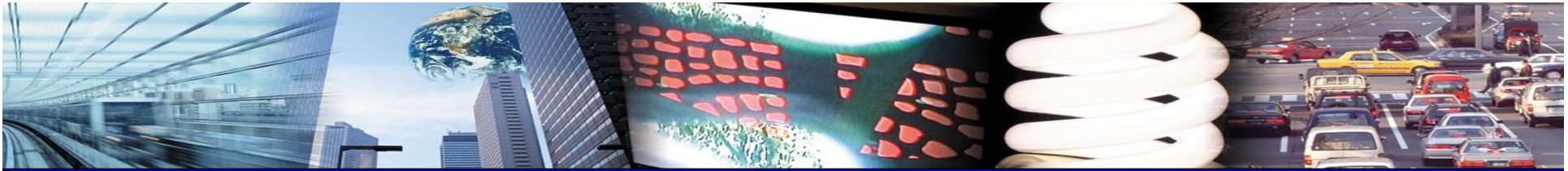
**Hydropower  
Energy**

**National Renewable Energy Program (NREP)**

## Sectoral Targets

1. Increase geothermal capacity by 75.0 percent;
2. Increase hydropower capacity by 160 percent;
3. Deliver additional 277MW biomass power capacities;
4. Attain wind power grid parity with the commissioning of 2,345 MW additional capacities;
5. Mainstream an additional 284 MW solar power capacities and pursue the achievement of the 1,528 MW aspirational target;
6. Develop the first ocean energy facility for the country.





# AREAS COVERED IN THE REVIEW

## Power Supply System

### Feed-in-Tariff

RE Source/Technology	Rates
Solar	₱ 9.68 (USD 0.242)
Wind	₱ 8.53 (USD 0.213)
Biomass	₱ 6.63 (USD 0.166)
Run-of-the-river Hydropower	₱ 5.90 (USD 0.147)

*FiT for ocean thermal projects is for further study and data gathering, while the hydropower reservoir and geothermal supplies were not subjected to the FIT due to market competitiveness.*



# AREAS COVERED IN THE REVIEW

## Green House Gas Management

**CDM**

Clean Development Mechanism

**RPS**

Renewable Portfolio Standards

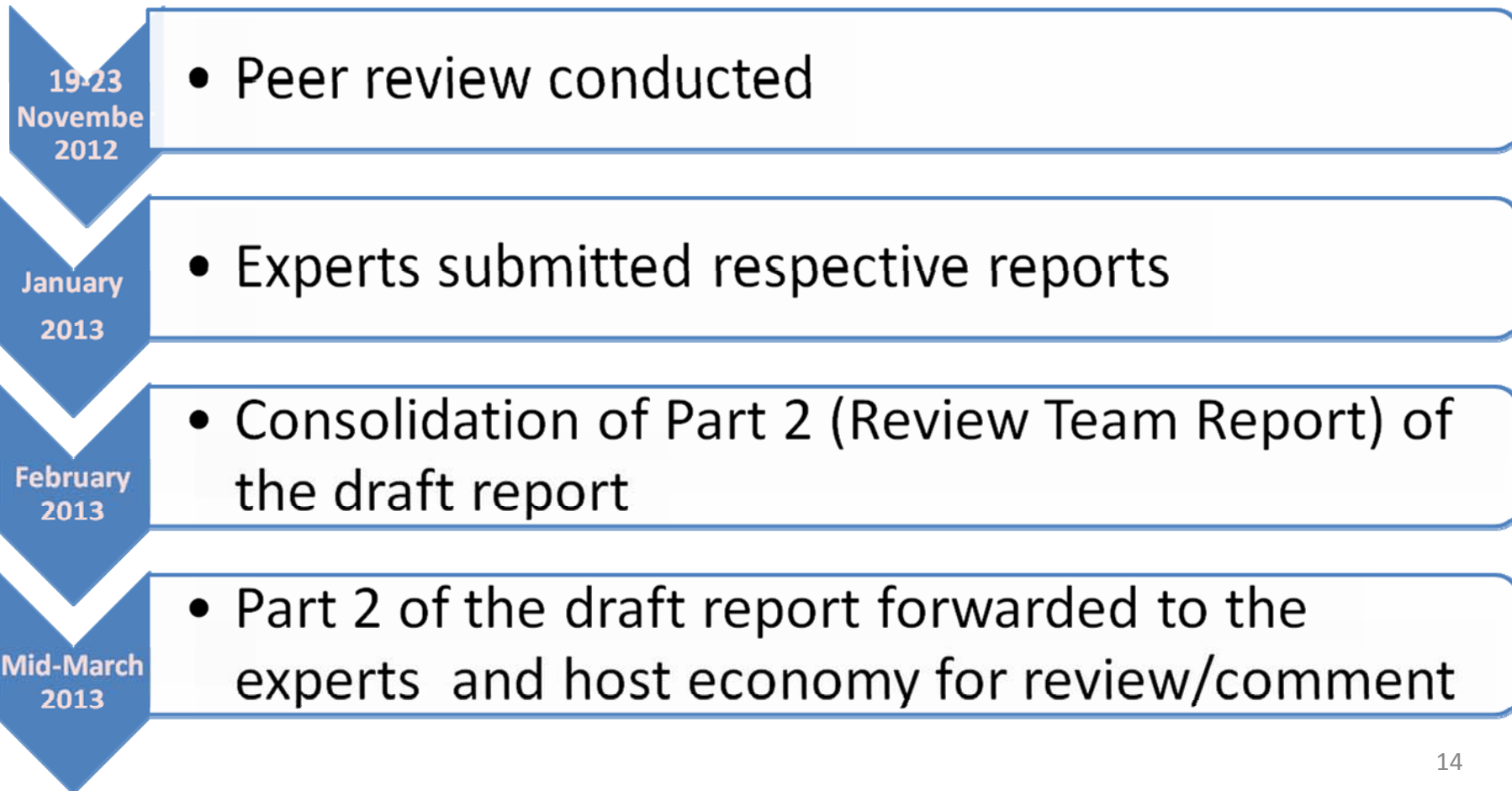


Energy Reform Agenda (ERA)



# PROGRESS OF PRLCE IN THE PHILIPPINES

## *What has been done?*

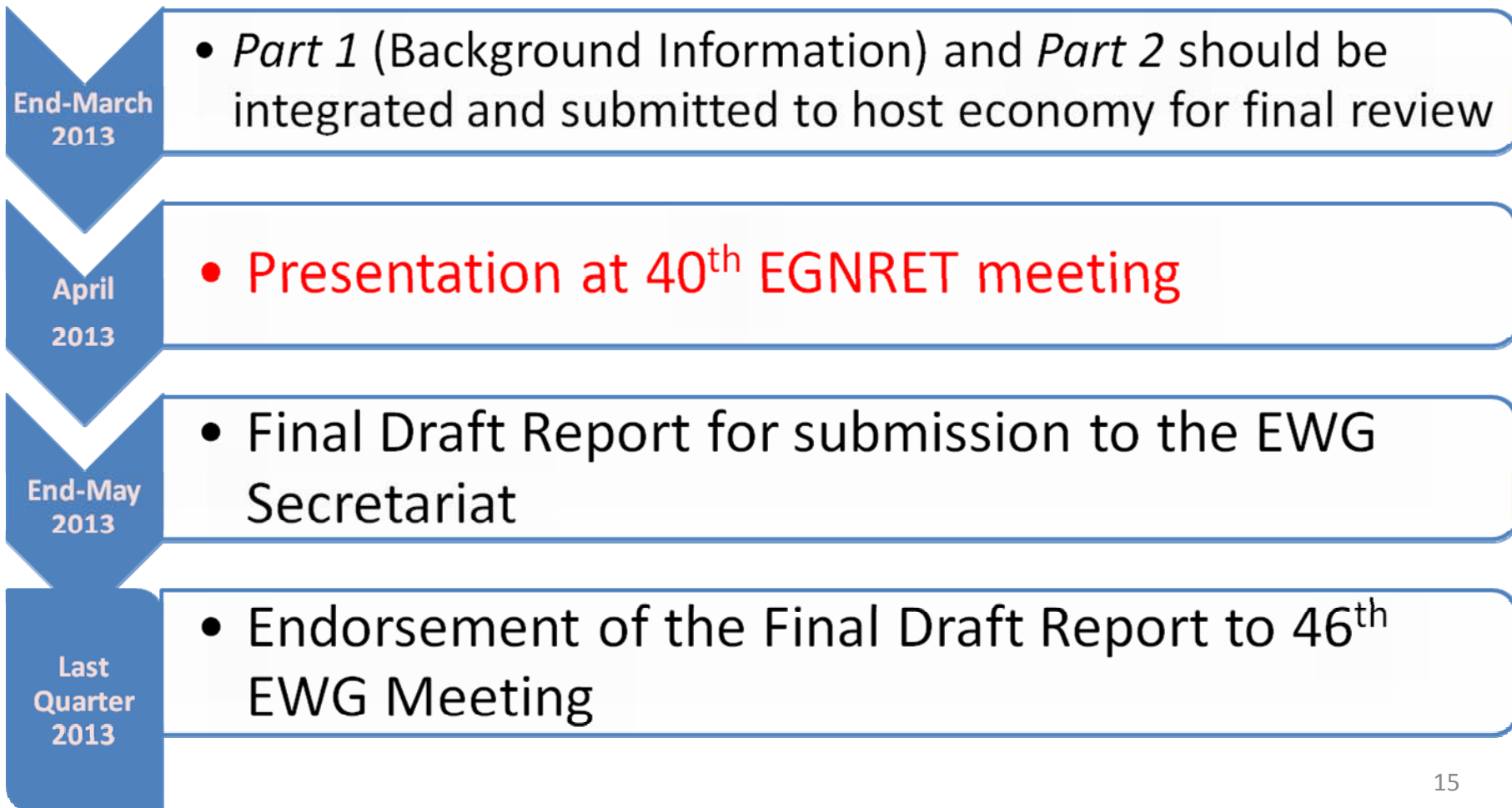






# PROGRESS OF PRLCE IN THE PHILIPPINES

## What's Next?





# THE REVIEW TEAM

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*(Review Team Chair)*

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- Dr. Kazutomo **IRIE**  
*(Institutional Context)*

APERC



- Ms. Elvira Torres-**Gelindon**  
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- Dr. Li **KUISHAN**  
*(Hydropower Energy)*

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- Mr. Masaomi **KOYAMA**  
*(Geothermal, Solar and Wind)*

IRENA



- Dr. Akihiro **WATABE** *(Green House Gas Management)*

Japan



- Mr. Haniff **NGADI** *(Power Supply System)*

Malaysia



- Dr. Jonathan **LEAVER**  
*(Renewable Energy Goals and Strategy)*

New Zealand



- Dr. Chatchawan **CHAICHANA**  
*(Bio-fuels and Biomass Energy)*

Thailand







# PHOTOS







**THANK YOU FOR  
YOUR ATTENTION**